Pursuant to the authority vested in the California Air Resources Board by Health and Safety Code Division 26, Part 5, Chapters 1 and 2; and pursuant to the authority vested in the undersigned by Health and Safety Code Sections 39515 and 39516 and Executive Order G-19-095;

IT IS ORDERED AND RESOLVED: The engines and emission control systems produced by the manufacturer as described below are certified for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

Model Year	Engine Family	Combustion Cycle	Fuel Operation	Fuel Type(s)	Engine Operation
2024	RCEXL04.5AAH	Diesel	Dedicated	Diesel	Variable and Constant Speed

Emission Control Systems	Special Features
[1]: Electronic Direct Injection (DDI), Charged Air Cooler (CAC), Exhaust Gas Recirculation (EGR), Electronic Control Module (ECM), Turbocharger (TC), Diesel Oxidation Catalyst (DOC), Selective Catalytic Reduction – Urea (SCR-U), Ammonia Oxidation Catalyst (AMOX)	None

The certified engine models are attached.

The listed engine models comply with the following: 1) emission standard limits (STD) and Not-To-Exceed (NTE) limits, as applicable, for criteria pollutants non-methane hydrocarbons (NMHC), nitrogen oxides (NOx), carbon monoxide (CO), and particulate matter (PM), and for smoke opacity as demonstrated during the Acceleration (ACL) and Lugging (LUG) modes, and the peak value (PEAK) in either mode of the Smoke Opacity cycle, as set forth in 13 CCR 2423 and the applicable California test procedures for off-road compression-ignition engines, and 2) family emission limits (FEL) declared by the manufacturer as allowed by the applicable California test procedures, stated in units of gram per kilowatt-hour (g/kWh-hr) and percent opacity (%opacity), respectively, except as noted, or designated as not applicable (*).

Applicable Standard		Criteria				Smoke Opacity		
		NMHC	NOx	CO	PM	ACL	LUG	PEAK
Tier 4 Final 75 ≤ kW < 130	STD	0.19	0.40	5.0	0.02	*	*	*
	FEL	*	0.37	*	*	*	*	*
	NTE	0.28	0.56	6.3	0.03	*	*	*

BE IT FURTHER RESOLVED: Any declared FEL is the emission limit to which all engines must comply in lieu of the standard limit for certification purposes, subject to the restrictions of averaging, banking, or trading (ABT) programs allowed by the applicable California test procedures.

BE IT FURTHER RESOLVED: For the listed engine models, the manufacturer has submitted materials to demonstrate certification compliance with 13 CCR 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control warranty).

BE IT FURTHER RESOLVED: The listed engine models may only be installed in or on equipment such that engine operation is consistent with off-road compression-ignition engines as defined in 13 CCR 2421(a)(39).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

Executed on this 6th day of July 2023.

Robin U. Lang

Robin U. Lang, Chief
Emissions Certification and Compliance Division

Attachment: Engine Models **EO #:** U-R-002-0868 **Family:** RCEXL04.5AAH **Date Applicable:** 6/27/2023

Model	Code	Trim	Config	Displacement	Displacement - Units	Peak Power	Peak Power - Units	Peak Power - Speed (rpm)	Peak Power - Fueling	Peak Power - Fuel Units	Peak Torque	Peak Torque - Units	Peak Torque - Speed (rpm)	Peak Torque - Fuel	Peak Torque - Fuel Units	OBD Status	OBD Fines ($)	GHG	ECS #	Notes
QSB4.5	OB1		I4	4.5	Liters	173	horsepower	2500	115	mm3/stroke	520	lb-ft	1500	78	lb/hr	N/A	N/A	N/A	1	
QSB4.5	OB2		I4	4.5	Liters	163	horsepower	2500	109	mm3/stroke	466	lb-ft	1500	70	lb/hr	N/A	N/A	N/A	1	
QSB4.5	OB3		I4	4.5	Liters	130	horsepower	2500	92	mm3/stroke	457	lb-ft	1500	68.6	lb/hr	N/A	N/A	N/A	1	
QSB4.5	OB4		I4	4.5	Liters	160	horsepower	2300	112	mm3/stroke	460	lb-ft	1500	69	lb/hr	N/A	N/A	N/A	1	
QSB4.5	OB5		I4	4.5	Liters	130	horsepower	2300	95	mm3/stroke	378	lb-ft	1500	57	lb/hr	N/A	N/A	N/A	1	
QSB4.5	OB6		I4	4.5	Liters	160	horsepower	2200	117	mm3/stroke	460	lb-ft	1500	69	lb/hr	N/A	N/A	N/A	1	
QSB4.5	OB7		I4	4.5	Liters	140	horsepower	2200	104	mm3/stroke	440	lb-ft	1500	66	lb/hr	N/A	N/A	N/A	1	
QSB4.5	OB8		I4	4.5	Liters	130	horsepower	2200	98	mm3/stroke	430	lb-ft	1500	64.6	lb/hr	N/A	N/A	N/A	1	
QSB4.5	OB9		I4	4.5	Liters	121	horsepower	2200	92	mm3/stroke	347	lb-ft	1500	52.5	lb/hr	N/A	N/A	N/A	1	
QSB4.5	OB10		I4	4.5	Liters	173	horsepower	2000	141	mm3/stroke	520	lb-ft	1500	78	lb/hr	N/A	N/A	N/A	1	
QSB4.5	OB11		I4	4.5	Liters	155	horsepower	2000	125	mm3/stroke	460	lb-ft	1500	69	lb/hr	N/A	N/A	N/A	1	
QSB4.5	OB12		I4	4.5	Liters	140	horsepower	2000	113	mm3/stroke	457	lb-ft	1500	68.6	lb/hr	N/A	N/A	N/A	1	
QSB4.5	OB13		I4	4.5	Liters	155	horsepower	2000	125	mm3/stroke	460	lb-ft	1500	69	lb/hr	N/A	N/A	N/A	1	
QSB4.5	OB14		I4	4.5	Liters	160	horsepower	2300	112	mm3/stroke	460	lb-ft	1500	69	lb/hr	N/A	N/A	N/A	1	